

## ABSTRACT

The invention relates to a mutation within the *sap* operon of an avirulent clone of a nontypeable strain of *Haemophilus influenzae* (NTHi). The invention also relates to the NTHi *sap* operon genes and the polypeptides encoded by 5 these polynucleotide sequences. The invention also relates to a novel 110 kDa NTHi outer membrane protein and the polynucleotide that encodes this outer membrane protein. Methods of screening for NTHi infection, and treating and preventing NTHi related disorders are also contemplated.